

Work Order ID 53606

November 10, 2009 7:15:26 AM

Ship to East 12/11

PRELIMINARY ISSUE

Page 1

Item ID: D3199-3

Accept

Setup Start

Revision ID:

Stop

Item Name: Bracket

Start Date: 11/10/09 Start Qty: 2.00

Cust Item ID:

Required Date: 11/11/09 Req'd Qty: 2.00

Customer:

Reference:

Run Start

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3199

C-PRELIM

100

0.00



FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

Cut as per Dwg D3199

Dwg Rev: *025*

Prog Rev: *Lim*

Deburr if required

12 9-11-10

3

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

12 9-11-10

Work Order ID 53606

November 10, 2009 7:15:26 AM

Page 2

Item ID: D3199-3

Accept

Revision ID:

Item Name: Bracket

Start Date: 11/10/09 Start Qty: 2.00

Required Date: 11/11/09 Req'd Qty: 2.00

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

2 1
PTO ~~Exch~~ 11-11-10

130

Bend as per dwg
Small Fab

0.00



Brake NC

Memo

0.00

Brake NC

(See PTO to sign
off on scrap part)
SB 02/10/10

2 8

140

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

2 11-11-11

W/O: 53606

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
09.11.18	130	1 part for Template from Eagle	u	---			

Part No: D3199-3 PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: new order Date: 13.11.18

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09.11.10	100	1 part scrap. Has a joggle/ step down 0.070". Part sh: filed during cutting on water jet. R.C. process		part is scrap use for bend set up.	 09/11/10			

NOTE: Date & initial all entries

Work Order ID 53606

November 10, 2009 7:15:27 AM

Page 3

Item ID: D3199-3

Accept

Setup Start

Revision ID:

Stop

Item Name: Bracket

Start Date: 11/10/09 Start Qty: 2.00

Cust Item ID:

Required Date: 11/11/09 Req'd Qty: 2.00

Customer:

Reference:

Run Start

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

150

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME: 9:00AM
OVEN TEMPERATURE: 320°F
FINISH TIME: 9:30AM

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

170

Identify as per dwg & Stock Location: _____

0.00



Packaging

Memo

0.00

Packaging

SALE TO EAGLE

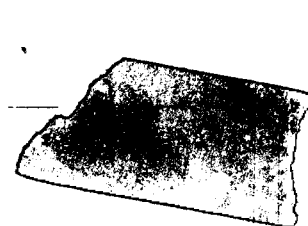
POSITIVE RECALL

EFFECTIVE DATE: 11.11.09 AUTH: u

RELEASED DATE: 11.11.09

u 11.11.09

DATE: 11.11.09



Work Order ID 53606

November 10, 2009 7:15:27 AM



Page 4

Item ID: D3199-3

Accept



Setup Start



Revision ID:

Item Name: Bracket

Stop



Start Date: 11/10/09 Start Qty: 2.00



Cust Item ID:

Required Date: 11/11/09 Req'd Qty: 2.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

0.09.11.20

Picklist Print

November 10, 2009 7:15:25 AM

Page 1

Work Order ID: 53606

Parent Item: D3199-3

Parent Item Name: Bracket

Comments: IPP RevA: RevC-prelim DD verified by:EC

Start Date: 11/10/09

Required Date: 11/11/09

Start Qty: 2.00

Required Qty: 2.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

M304S20GA

Purchased

No

100

sf

381.2528

0.7097

1



18 9-11-10

304/316 .040 Sheet

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT

381.2528158

110076

1.37053684

111571

0.94

112567

39.7844789

112885

83.1578

113062

192

113077

64

112567

3

8

7

6

5

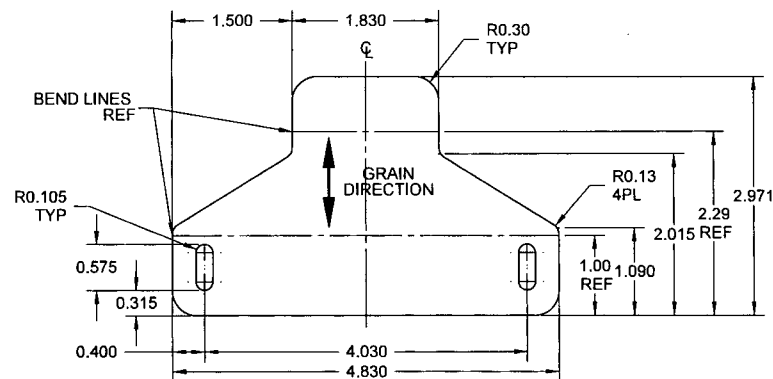
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3

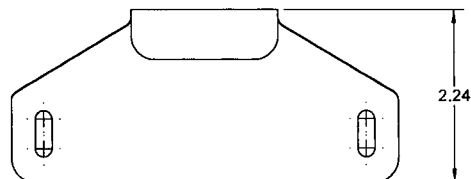
2

1

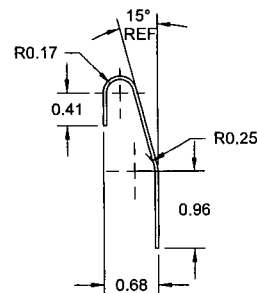
all
53606



D3199-1F FLAT PATTERN



D3199-1 BRACKET
MADE FROM D3199-1F



RELIMINARY ISSUE

CR/1/19

NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET, 0.040 THICK, ANNEALED, 2B FINISH
PER MIL-S-5059, OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S20GA
- 2) FINISH: POWDER COAT "GREY SANDEXT" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-1" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.11 lbs

C	ADD -3/4 PART (SHEET 2-4)	CB	09.10.05
B	2.24 WAS 2.142; ADD FINISH; UPDATE DWG	CB	06.11.01
A	NEW ISSUE	CP	03.08.05
REV.	DESCRIPTION	BY	DATE
DESIGN	97		
DRAWN	15		
CHECKED	15		
MFG. APPR.	15		
APPROVED	15		
DE APPR.			
DATE	09.10.05		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV. C
DRAWING NO.	D3199	SHEET 1 OF 4
TITLE	BRACKET	SCALE
		NTS

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8

7

6

5

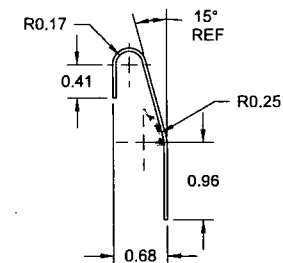
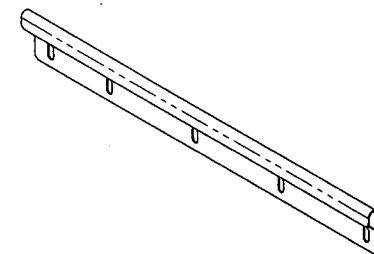
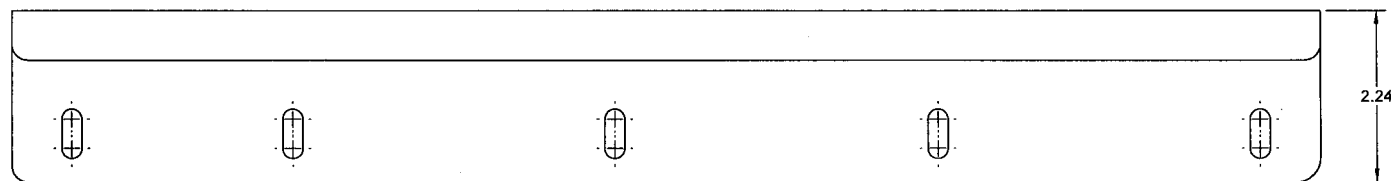
4

3

2

1

ulv
536db



 **D3199-3 BRACKET**
MADE FROM D3199-3F

PRELIMINARY ISSUE

MP
29/11/19

NOTES:

- 1) MATERIAL: MADE FROM D3199-3F
- 2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-3" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.55 lbs

DESIGN	<i>JS</i>	DART AEROSPACE LTD	
DRAWN	<i>JS</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>JS</i>	DRAWING NO. D3199	REV. C
MFG. APPR.	<i>JS</i>	SHEET 2 OF 4	
APPROVED	<i>JS</i>	TITLE	SCALE
DE APPR.		BRACKET	NTS
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8

7

6

5

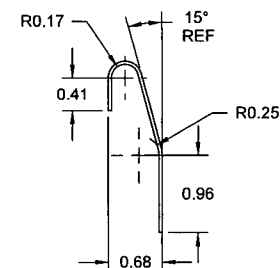
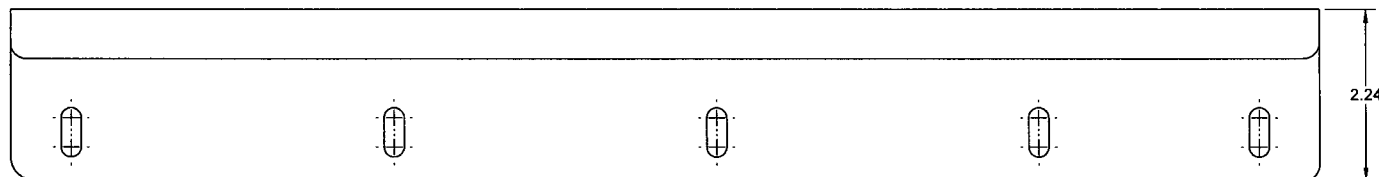
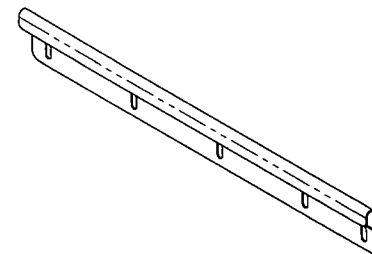
4

3

2

1

W/O
53604



 **D3199-4 BRACKET**
MADE FROM D3199-3F

PRELIMINARY ISSUE

ND 09/11/19

NOTES:

- 1) MATERIAL: MADE FROM D3199-3F
- 2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-4" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.55 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3199	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		BRACKET	NTS
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8

7

6

5

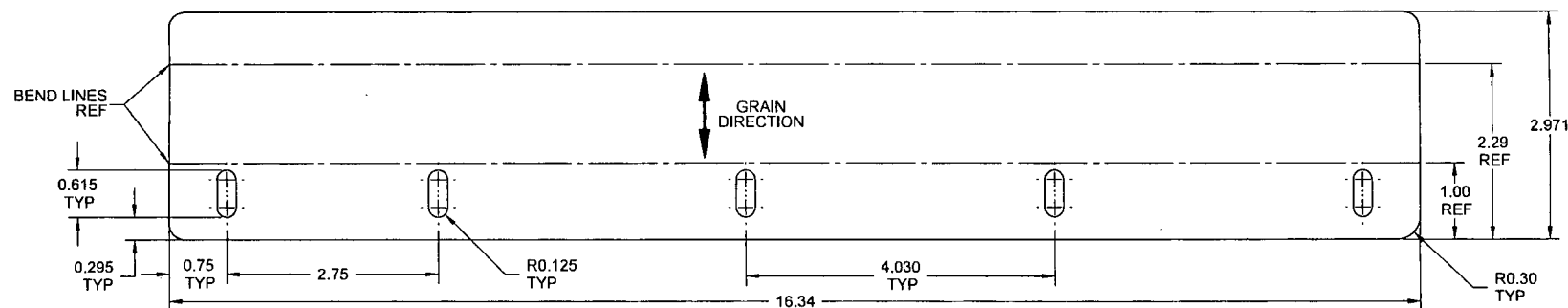
4

3

2

1

ULO
S3606



D3199-3F FLAT PATTERN

PRELIMINARY ISSUE

09/11/19

NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET, 0.040 THICK, ANNEALED, 2B FINISH
PER MIL-S-5059, OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S20GA
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.55 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3199	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		BRACKET	NTS
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L Lacelle

From: Harvey Siemens [hsiemens@dartaero.com]
Sent: November 11, 2009 11:30 AM
To: 'L Lacelle'
Subject: RE: D3199-3/-4

Then I guess we better not have them painted – Thanks Linda

Regards,

Harvey Siemens

Mechanical Designer
DART Aerospace Ltd.

P: 403-717-0328

F: 403-717-1288

E: hsiemens@dartaero.com

W: www.dartaero.com

M: 1060 McTavish Road NE, Calgary, Alberta, T2E 5G9

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From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: Wednesday, November 11, 2009 9:28 AM
To: 'Harvey Siemens'
Subject: RE: D3199-3/-4

I afraid the paint may chip.
LL

From: Harvey Siemens [mailto:hsiemens@dartaero.com]
Sent: November 11, 2009 11:24 AM
To: 'L Lacelle'
Subject: RE: D3199-3/-4

If we paint them can they still be formed or will the paint flake/chip off?

Regards,

Harvey Siemens

Mechanical Designer
DART Aerospace Ltd.

P: 403-717-0328

F: 403-717-1288

E: hsiemens@dartaero.com

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M: 1060 McTavish Road NE, Calgary, Alberta, T2E 5G9

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11/11/09

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From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: Wednesday, November 11, 2009 9:04 AM
To: 'Harvey Siemens'
Cc: 'David Shepherd'; 'Mike Petsche'
Subject: RE: D3199-3/-4

Harvey do you want these sent to you unpainted? I assume so, but just want to check
 LL

From: Harvey Siemens [mailto:hsiemens@dartaero.com]
Sent: November 9, 2009 1:35 PM
To: 'Kim Johnston'; 'David Duval'; 'L Lacelle'
Cc: David Shepherd; 'Mike Petsche'
Subject: D3199-3/-4

General question for everyone but specifically for Linda and David D.

As a follow up to the previous email regarding production of 2 each D3199-3/-4s. Is it possible to get these parts off the Calgary for Friday trial fit? Is this too tight of a time frame?

Let us all know, thanks.

Regards,

Harvey Siemens
 Mechanical Designer
 DART Aerospace Ltd.

P: 403-717-0328
 F: 403-717-1288
 E: hsiemens@dartaero.com
 W: www.dartaero.com

M: 1060 McTavish Road NE, Calgary, Alberta, T2E 5G9

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From: Mike Petsche [mailto:mpetsche@dartaero.com]
Sent: Monday, November 09, 2009 10:52 AM
To: 'Harvey Siemens'; 'David Shepherd'
Cc: Bill Beckett
Subject: FW:
Importance: High

I guess this BHT are for the DND guys? I guess this means we can release.....

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: Monday, November 09, 2009 8:32 AM
To: 'Mike Petsche'
Cc: 'Bill Beckett'; 'Melanie Fauteux'; 'Amy Sauve'
Subject: FW:
Importance: High

11/11/09

Looks like we received the order from BHT Calgary, still have not received an ECN for these....??

LL

From: Amy Sauve [mailto:asauve@dartaero.com]

Sent: November 9, 2009 8:27 AM

To: 'L Lacelle'

Subject:

Linda

We received an order for the following brackets, and they are not in the system as of yet. D3199-3 LH....D3199-4 RH.

Could you please advise me when the NCN has been completed so I can continue with this order.

Thank

AMY SAUVE

11/11/09

L Lacelle

From: David Shepherd [dshepherd@dartaero.com]
Sent: November 17, 2009 2:31 PM
To: 'L Lacelle'; 'Peggy McDonald'
Cc: 'Mike Petsche'; 'Bill Beckett'; 'Harvey Siemens'
Subject: RE: Door Track Parts for DND

Yup ... to your attention, Linda

David

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: Tuesday, November 17, 2009 12:18 PM
To: 'David Shepherd'; 'Peggy McDonald'
Cc: 'Mike Petsche'; 'Bill Beckett'; 'Harvey Siemens'
Subject: RE: Door Track Parts for DND

Yes, we will, did you send to my attention?

Thx
LL

From: David Shepherd [mailto:dshepherd@dartaero.com]
Sent: November 17, 2009 1:33 PM
To: 'Peggy McDonald'
Cc: 'Mike Petsche'; 'L Lacelle'; 'Bill Beckett'; 'Harvey Siemens'
Subject: Door Track Parts for DND

Peggy,

Just to keep you in the loop, we received and bent the new door track pieces in Calgary. We have successfully installed these pieces on a DND door here at Eagle and installed the door on the aircraft. The door doesn't slide quite as well as before, but we do not believe this is because there is a problem with the new brackets.

With the longer bracket, there is increased friction.

Also, we didn't spend a lot of time adjusting the new brackets to optimize the fit.

Anyways, Harvey and I feel comfortable with sending these brackets to DND for trial.

They are on their way back to Hawkesbury for painting and I suspect Linda will be able to ship on Friday.

Linda,

~~Both sets of brackets on their way back to you.~~

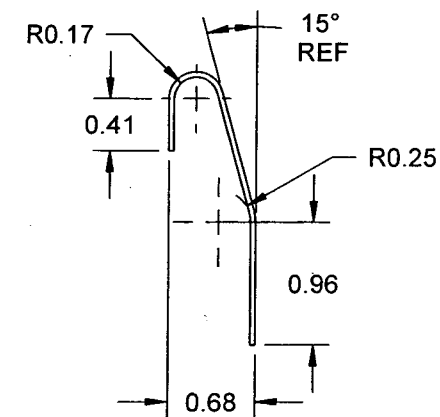
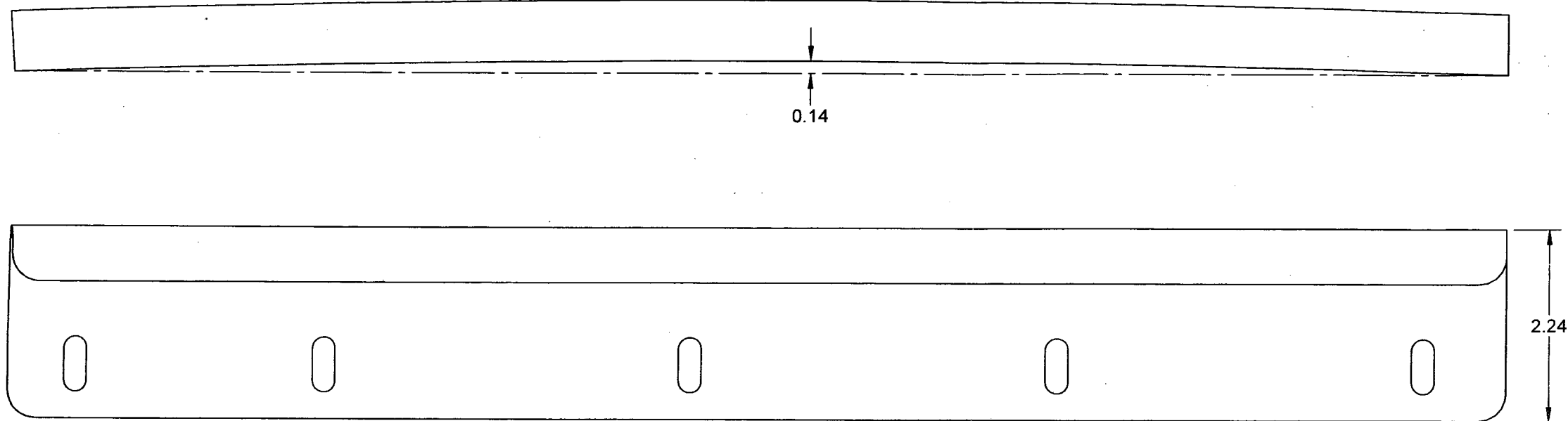
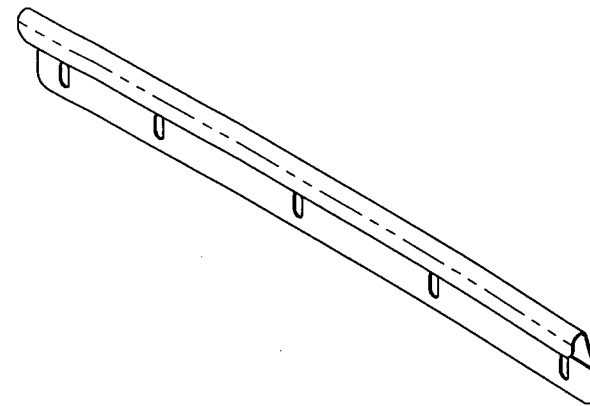
Brackets #1 and #2 should be painted and sent to DND.

Brackets #3 and #4 should be retained for Dart reference.

He also sent the bend tool that Eagle devised to maintain the "J" as they rolled the brackets.

Regards,
David

11/18/09



D3199-3 BRACKET
MADE FROM D3199-3F

RELEASED
2009-11-20

NOTES:

- 1) MATERIAL: MADE FROM D3199-3F
- 2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-3" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.55 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3199	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		BRACKET	NTS
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8 7 6 5 4 3 2 1

D

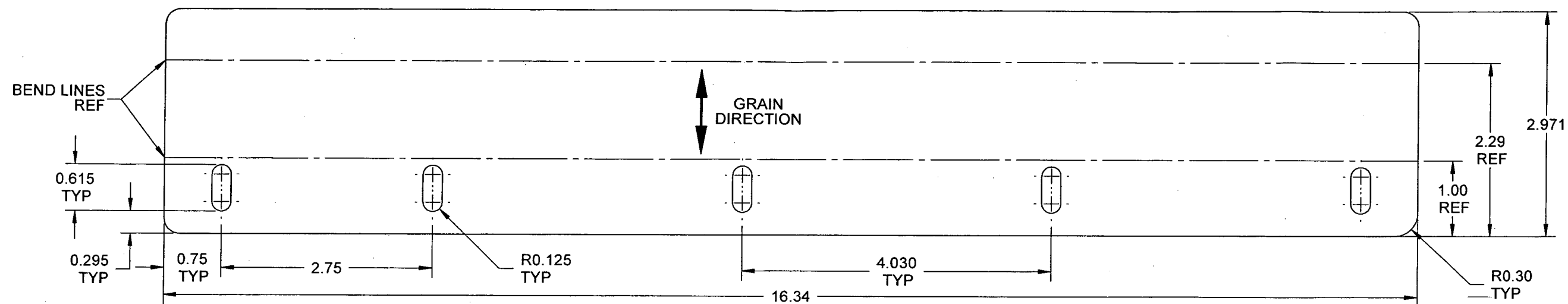
D

C

C

B

B



D3199-3F FLAT PATTERN

RELEASED
2009-11-20

- NOTES:**
- 1) MATERIAL: AISI 304/316 SS SHEET, 0.040 THICK, ANNEALED, 2B FINISH
PER MIL-S-5059, OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S20GA
 - 2) FINISH: N/A
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.55 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3199	SHEET 4 OF 4
APPROVED		TITLE	SCALE
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8 7 6 5 4 3 2 1